

## **REMARKS**

This application has been reviewed in light of the Office Action mailed July 27, 2006.

Reconsideration of this application in view of the below remarks is respectfully requested.

Claims 1 – 20 are pending in the application with Claims 1 and 11 being in independent form. By the present amendment, Claims 6 – 10 and 16 – 20 are amended. No new subject matter is introduced into the disclosure by way of the present amendment.

### **I. Objection to Claims 6 – 10 and 16 – 20**

Claims 6 – 10 and 16 – 20 are objected to because of alleged informalities. Specifically, according to the Examiner the phrasing in lines 3 – 5 of Claims 6 – 10 and 16 – 20 is unclear and correction is required.

In response, Claims 6 – 10 and 16 – 20 have been amended to recite: "...after a bank and a page to be accessed next have been determined, said memory master informs said memory control unit of information about said bank and said page to be accessed and wherein said memory control unit..." Thus, adequately overcoming the objection and clarify the limitation. Accordingly, Applicant respectfully requests withdrawal of the objection with respect to Claims 6 – 10 and 16 – 20.

### **II. Rejection of Claims 1 and 11 Under 35 U.S.C. § 102(e)**

Claims 1 and 11 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 7,020,762 issued to Sprangle et al.

The Examiner asserts that Sprangle et al. discloses a memory master to make a request for access to memory in col. 2, lines 27 – 32; a memory control unit to produce control signals of memories based on access information to be output from said memory master in col. 2, lines 50 – 54 and further in col. 4, lines 18 – 21; and a hit predicting unit 330 in FIG. 3 and col. 2, lines 50

– 54, which performs the function of predicting whether or not next access to each bank in memory becomes access to a same page in col. 4, line 60 – col. 5, line 13.

However, based on the cited passages, it is unclear what element of the Sprangle et al. disclosure is considered by the Examiner to be equivalent to Applicant's memory master, since no memory master is explicitly disclosed in the cited passages. In addition, the cited passages do not disclose access information being output from the memory master to the memory controller nor even that the memory controller uses such access information to produce control signals. The cited passages merely disclose that a memory controller may permit processors to read from and write to system memory and a BIOS EPROM.

The hit predicting unit disclosed in Sprangle et al. generates a list of pages within system memory predicted to be open. For example, if pages 12, 14, 16 and 18 were accessed in the past, and the page management implementation of system memory 110 allows for 4 pages to be simultaneously open, then the page hit predictor may predict that a new access to page 12 will hit, and a new access to page 13 will miss. (See: col. 5, lines 1 – 7). Consequently, it is clear that the hit predicting unit only predicts whether a previously opened page is still open, and thus when the page is once again accessed, may hit an already open page.

Contrastingly, in Applicant's claimed hit predicting unit, the next page access is clearly defined by the claim limitation: "...memory control unit, when a hit predicting unit predicts that "a page hit is found" which means that "next access to said bank becomes access to a same page", terminates its routine without closing a bank being presently accessed at time of completion of present access operations and, when said hit predicting unit predicts that "a miss hit is found" which means that "next access to said bank becomes access to a different page", closes said bank being presently accessed at time of completion of present access operations and terminates its

routine...” Based on the recited limitation, Applicant’s hit predicting unit predicts the next page to be accessed, not as in Sprangle et al., whether a previously accessed page is still open.

It is well-settled by the Courts that “[A]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company, et al., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir., 1984).

Therefore, as demonstrated above, because Sprangle et al. does not disclose each and every element recited in the present claims, Applicant respectfully submits that the rejection has been traversed. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claims 1 and 11 under 35 U.S.C. § 102(e).

### **III. Rejection of Claims 2 – 10 and 12 – 20 Under 35 U.S.C. § 103(a)**

Claims 2 – 10 and 12 – 20 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sprangle et al. in view of U.S. Patent No. 6,976,122 issued to Sander et al. Claims 2 – 10 and 12 – 20 depend from independent Claims 1 and 11, and thus include all the limitations recited in those independent claims.

As demonstrated above, Sprangle et al. fails to disclose all the limitations recited in Claims 1 and 11. In addition, Sander et al. fails to overcome the cited deficiencies in Sprangle et al. Consequently, Sprangle et al. and Sander et al., taken alone or in any proper combination, fail to disclose or suggest the present invention as recited in Applicant’s Claims 1 and 11.


Therefore, for at least the reasons provided above, Claims 2 – 10 and 12 – 20 are believed to be patentably distinct and allowable over the cited prior art references. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claims 2 – 10 and 12 – 20 under 35 U.S.C. § 103(a) over Sprangle et al. in view of Sander et al.

### CONCLUSIONS

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1 – 20 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Applicant's undersigned attorney at the number indicated below.

Respectfully submitted,



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